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6-1501  
Done

APPLICANT: Horan, et al.  
U.S. Serial No. 09/470,360  
FILING DATE: December 22, 1999  
RE: PROCESS IMPROVEMENT FOR  
CONTINUOUS ETHYL ACETATE  
PRODUCTION

BEFORE THE PRIMARY  
EXAMINER: T. Victor OH

GROUP ART UNIT: 1621

Per Fax Transmission to no. 703-308-4556  
Hon. Commissioner of Patents  
Washington, D.C. 20231

Applicant's Docket No. C-7197

### RESPONSE TO OFFICE ACTION

This is in response to the office action dated 01/31/01 for the above identified application. Also enclosed is a one-month petition for extension of time to timely reply to this action.

### REMARKS

Reconsideration of the present application in view of the remarks made herein is respectfully requested. All rejections stand respectfully traversed.

Applicants thank the examiner for the reminder regarding 37 CFR 1.56 and inventorship. All claims pending are commonly owned.

Broadly, the present invention as claimed involves an improved process to produce ethyl acetate, which contains minor amounts of acetic acid, typically less than 50 ppm. Additionally disclosed is a process for producing ethyl acetate by using an additional step to remove substantial amounts of water from a condensed reaction stream and recycling portions of that dried stream back into the production process. Another portion of the dried stream is processed in a second distillation zone to produce an ethyl acetate product.

Claims 1-5 stand rejected under 35 USC Section 103(a) as being unpatentable over Papa et al, US 5,231,222 ("Papa") in view of Spiske et al, US 5,248,427 ("Spiske"). This rejection is respectfully traversed.

It is stated in the action that Papa "teaches a process of producing an ester compound by reacting an alcohol having an 2-5 carbon atoms with a carboxylic acid with 1-4 carbon atoms in the presence of an esterification catalyst in the following steps:

- a. removing the reaction products such as ester and water from the reactor by distillation,
- b. forming a water ester azeotrope by the addition of water,
- c. separating the water ester azeotrope in a separate vessel to isolate the desired ester."